

AMENDMENTS TO THE SPECIFICATION

At page 1, please amend the title as follows:

ASSAY FOR PREDICTING CELL ACTIVITY THE CAPACITY OF A CELL POPULATION TO INDUCE BONE FORMATION

At page 5, please amend the paragraph starting at line 29 as follows:

It is also possible to detect ALP by allowing it to convert a substrate for the enzyme ALP and detecting formed reaction product. Suitable ~~substrate~~ substrates in this respect are para-nitro phenyl phosphate and ~~alpha-naphthol AS-BI~~ alpha-naphthol AS-BI phosphate. Hydrolysis of the latter leads to the formation of a highly insoluble ~~naphthol~~ naphthol that may be coupled to a suitable diazonium salt that ~~[[it]]~~ is preferably present. A suitable example of such a diazonium salt is fast blue RR. The coupling provokes a ~~ecolour~~ color reaction that can be detected by the naked eye or by UV. The reaction product obtained after conversion of para-nitro phenyl phosphate by ALP may be detected using ~~Sigma 104R~~ SIGMA 104® phosphatase substrate (Sigma-Aldrich, St. Louis, MO) and UV. When the substrate is para-nitro phenyl phosphate, the cells are preferably first subjected to lysis and sonification.

At page 10, please amend the paragraph starting at line 14 as follows:

Human bone marrow stromal cells were plated at a density of 5000 cell per ~~em(superscript: 2)~~ cm² in 6 well plates (n=3) and cultured with and without dexamethasone for 7 days. After washing with PBS they were subjected to lysis and sonification. As substrate for ALP, para-nitro phenyl phosphate (PNP) was used (10 mM PNP in 1 ml diethanol amine and 1

mM magnesium chloride ($\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$) at pH 9.8). The reaction product was detected using ~~Sigma-104R~~ SIGMA 104[®] phosphatase substrate (52.6 mg) dissolved in 10 ml ALP buffer (10 ml 10M diethanol amine and 90 ml demi-water to which, after overnight incubation, 10.33 mg magnesium chloride ($\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$) was added). The pH was adjusted to 9.8 using 1N HCl. 100 μl of this substrate was added to 100 μl of the cell lysate for 15 minutes at 37°C. A yellow ~~colour~~ color change was observed in a plate reader at 405 nm. The results obtained were calibrated and adjusted for the amount of DNA in a known manner.

At page 12, please amend the paragraph starting at line 29 as follows:

Human bone marrow stromal cells were seeded at a density of 5000 cells per ~~cm~~(superscript: 2) cm^2 in a T75 flask and cultured for 3-7 days in media with and without 1.25(OH)D3 (vitamin D3). After trypsinization the cells were blocked against nonspecific binding. Cells were then resuspended in FIX[®] solution A (fixation medium) (Caltag ~~laboratories~~ Laboratories, Burlingame, CA), incubated for 15 minutes and washed. A mixture 1:1 was made of PERM[®] solution B (permeabilization medium) (Caltag ~~laboratories~~ Laboratories, Burlingame, CA) and the osteocalcin mouse anti-human antibody (Zymed) dissolved in the blocking buffer (1:100 dilution). The cells were incubated for 15 minutes with the mixture. After incubation and washing, antibody reactivity was detected by suspending the cells with blocking buffer containing ~~[[Goat]]~~ goat anti-mouse FITC conjugated ~~F(ab')₂~~ F(ab')₂ fragment (DAKO) (1:100 dilution) and incubating the cells for 30 minutes in the dark. After washing the cells were resuspended in FACS flow/staining and analyzed by a ~~FACS-Calibur~~ FACSCalibur apparatus (~~Becton-Dickenson~~ BD Biosciences Immunocytometry systems, Franklin Lakes NJ). For each event 10.000 events were collected.